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Professor Robert Hamers (chemistry) Lloyd Smith (chemistry) and Dan van der Weide (electrical engineering) working with a team of researchers at the Naval Research Laboratory and Argonne National Laboratory, have developed a new method for preparing ultra-stable, biologically-modified surfaces for direct electronic biosensing. One key step has been the development of new surface chemical modification schemes for diamond that provide unprecedented stability. A second key step has been to monitor changes in *electrical* properties of the bio-modified diamond films when exposed to biomolecules in solution.

The high stability and direct electronic detection may lead to a new generation of biosensors ideally suited to continuously monitor and identify hazardous biological agents in places like subways and airports.